

# Technical Data Sheet

## 3M™ Aluminum Foil Tape 427

### Product Description

3M™ Aluminum Foil Tape 427 combines a 3 mil nominal dead soft aluminum foil backing with a transparent acrylic adhesive. 3M aluminum foil tape 427 offers an easy-release liner.

### Product Features


- Flame resistant. Meets U.L. 746C (File E 122798) and 723, Class “L” low flammability rating (File R 7311).
- 3M aluminum foil tape 427 can be certified to meet L-T-80C.
- Meets requirements of FAR 25.853(a).
- The very low moisture vapor transmission rate makes these tapes a good sealant.
- The acrylic adhesive, combined with the durable aluminum backing, offers ideal properties for long serviceable life in and outdoors.
- Good candidate as a maskant in electroplating of aluminum because it will not contaminate the bath.
- Aluminum backing provides excellent reflection of both heat and light.
- Best results obtained when applied to a clean, dry surface above 32°F (0°C).

IMPORTANT: These tapes are not intended for medical usage. Neither 3M nor the Food and Drug Administration have evaluated or reviewed this tape for medical application. 3M does not recommend or endorse the usage of the aluminum tape for medical application. User assumes all risk and liability whatsoever in connection with usage of product in a medical application.

### Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

### Typical Physical Properties

Property	Values	Additional Information
Backing	Dead soft aluminum	
Adhesive Type	Acrylic	
Color	Shiny silver	
Liner	Easy-release paper	
Liner Thickness	0.08 mm	
Backing Thickness (mm)	0.07 mm	View 

Test Method: ASTM D3652

Total Tape Thickness (mil)	4.6 mil	View	^
Test Method: ASTM D3652			

Total Tape Thickness (mm)	0.12 mm	View	^
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Test Method: ASTM D3652

Backing Thickness	2.8 mil	View	^
Test Method: ASTM D3652			

Liner Thickness	3.1 mil		
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Approximate Weight	5.54 g/m/24 mm		

Approximate Weight	0.012 lb/yd/in		
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Water Vapor Transmission	0.77 g/m²/24 hr	View	^
Test Method: ASTM D3833			

Water Vapor Transmission	0.05 g/100 in²/24 hr	View	^
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Test Method: ASTM D3833

## Typical Performance Characteristics

Property	Values	Additional Information	
Tensile Strength	49 N/cm	View	^

Test Method: ASTM D3759

180° Peel Adhesion	5.5 N/cm	View	^
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Test Method: ASTM D3330			
Notes: 12 in/min (300 mm/min)			

180° Peel Adhesion	50 oz/in	View	^
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Test Method: ASTM D3330

Notes: 12 in/min (300 mm/min)

Tensile Strength (lb/in)	28 lb/in	View	^
Test Method: ASTM D3759			

Elongation at Break (%)	6 %	View	^
Test Method: ASTM D3759			

Long Term Temp C	149 °C	View	^
Test Condition: Long Term (day, weeks)			

Minimum Long Term Temperature Resistance	-54 °C	View	^
Test Condition: Long Term (day, weeks)			

Long Term Temp F	300 °F	View	^
Test Condition: Long Term (day, weeks)			

Minimum Long Term Temperature Resistance	-65 °F	View	^
Test Condition: Long Term (day, weeks)			

## Available Sizes

Property	Values	Additional Information
Standard Roll Length	55 m	
Standard Roll Length	60 yd	

## Storage and Shelf Life

Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% R.H. in the original carton.  
To obtain best performance, use this product within 24 months from date of manufacture.

## Industry Specifications

UL 746C (File E 122798)  
UL 723 Class “L” low flammability rating (File R 7311)  
Can be certified to meet L-T-80C  
FAR 25.853(a)

## Automotive Disclaimer

Select Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties,

undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

## Warranty, Limited Remedy, and Disclaimer

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## Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

## Bottom Matter

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## Trademarks

3M is a trademark of 3M Company.

## Handling/Application Information

### Application Examples

- Aircraft paint stripping maskant.
- Moisture barrier in “white goods” appliances.
- General purpose heat reflector and heat dissipater.
- Mechanically hold wires and cooling coils in “white goods” appliances.
- Repair tears on truck trailers and aircraft.
- Splicing of thin gauge foils.
- General purpose holding, patching, sealing applications – indoors and out.

## References

Property	Values
3m.com Product Page	<a href="https://www.3m.com/3M/en_US/p/d/b40067903/">https://www.3m.com/3M/en_US/p/d/b40067903/</a>
Safety Data Sheet SDS	<a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=427">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=427</a>

## ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

Information

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